

ABSTRACT of the disclosure

In a counter shaft type transmission equipped with a pair of transmission gear trains, the input shaft of the first gear train is connected with the engine and that of the second gear train is connected with the engine via a motor, the torque of the first gear train is shifted onto the second gear train for a while by means of the motor, and gear change in the first gear train is accomplished during the time. By setting the gear ratio of the second gear train to a half-position of gear ratio of the first gear train, motor capacity and battery capacity can be reduced and, because no clutch is needed, an economic transmission can be realized. Besides, by active transmission by means of the motor, torque transfer transmission becomes possible for both up-shift and down-shift. Furthermore, jump shift that has not been available in a prior art becomes possible and, since continuous ratio can be achieved, drivability of an automobile improves.